CHALKYITSIK
Health Clinic

Alaska Rural Primary Care Facility
Code and Condition Survey Report

July 23, 2001

I. EXECUTIVE SUMMARY

Overview

The Chalkyitsik Clinic is located in the village washeteria building which was built in 1994. It is well built and is in good condition. The clinic has outgrown its current space, however, and equipment, furniture, and storage items crowd certain spaces or make them unusable. The lack of adequate space for medical supplies and the lack of a trauma room prevent the staff from providing the level of care needed on a daily and emergency basis.

Renovation and Addition

The existing clinic is 768 s.f. and would require an addition of 1232 s.f. to meet the 2000 s.f. minimum area recommended for a medium clinic by the Alaska Rural Primary Care Facility study. The existing site has adequate space to allow for an addition to be constructed. The floor plan layout would require the remodel of approximately 20% of the interior space. The poor location of the exterior ramp and entry underneath the existing eaves will require the relocation of the entry to prevent icing and wintertime slipping hazards. The cost of required renovations and code upgrades, combined with the cost of a new addition equal 124% of the cost of a new clinic.

New Clinic

Because the cost of renovation and addition is more than 75% of the cost of new construction, a new clinic of at least 2000 s.f. should be built to replace the existing clinic. It appears that several sites are available near the existing clinic with access to utilities, other community services that are of adequate size to accommodate the new clinic.

II. GENERAL INFORMATION

A. The Purpose of the Report

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility (ARPCF) assessment, planning, design, and construction. The purpose of the Code and Condition Survey Report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need among the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information gathered will be tabulated and analyzed according to a set of fixed criteria that will yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most practical and cost effective means to bring the clinics up to a uniform standard of program and construction quality. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 1 and 2.

B. The Assessment Team

The survey was conducted on May 24, 2001 by John Biggs, AIA, Architects Alaska and Ralph DeStefano, PE, RSA Engineering. Dan Williams of ANTHC and Theresa Gallagher of Tanana Chiefs Conference were the team escorts. Dan and Theresa made introductions and conducted the village briefings. Team members who assisted in the preparation of the report included Stephen Schwicht and Ian VanBlankenstein of NANA/DOWL, project managers for the survey team, and Jay Lavoie of Estimations, Inc.

C. The Site Investigation

The format adopted is similar to the “Deep Look”, a facility investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. This written report includes a floor plan of the clinic and a site plan indicating the existing clinic site. Additional information gathered during the site investigation that is referred to in the report, which includes sketches of building construction details, a building condition checklist, and proposed plans for village utility upgrades, are not included with this report. This information is available for viewing at ANTHC’s Anchorage offices and will be held for reference.

III. CLINIC INSPECTION SUMMARY

A. Community Information

The community of Chalkyitsik has a current population of 83 as published in the 2000 U.S. Census. It is located 50 miles east of Fort Yukon in the Fairbanks Recording District. It is a part of the Doyon Regional Corporation. Refer to the attached Alaska Community Database prepared by the Alaska Department of Community and Economic Development in Appendix C for additional community information.

B. General Clinic Information

The Chalkyitsik Clinic was constructed in approximately 1994. The building is similar in design to other contemporary washeteria buildings in the region. This building is approximately 32' x 60'; the clinic portion of the building is approximately 32' x 24'. The building is constructed of conventional frame walls, floor, and roof. The interior is generally in good condition, however, the floor is finished with a rough surface, poured epoxy finish and the staff noted that the floor presents a serious tripping hazard.

C. Program Deficiency Narrative

The main programmatic deficiency pertains to the overall size of the clinic, the lack of adequate storage, and problems associated with tripping and slipping hazards, and snow and ice hazards at the entry ramp. Currently, there is no storage room and items stored in the second exam room make it unusable. Throughout the clinic, spaces lack adequate ADA accessible clearances. The floor of the clinic is a highly grippable, poured epoxy flooring used in the washeteria. This flooring creates tripping hazards, especially for the elderly. Also, the main entry ramp grating is oriented parallel to the direction of the ramp, and becomes so slippery with ice that it is dangerous and inaccessible. In addition to the slipping hazard, the ramp is located and oriented directly under and parallel with the roof eaves, so there is the additional hazard of falling ice and snow from the eaves along most of the ramp.

The following table illustrates a comparison between the current actual square footage (SF) and the 2000 s.f. minimum area recommended by the Alaska Rural Primary Care Facility study for a Medium Clinic:

Table 1 – ARPCF Clinic Area Comparison

Purpose/Activity	#	Existing Net SF	#	ARPCF Medium	Difference
Arctic Entry	1	44	2	2 @ 50=100	56
Wait/Recep/Closet	1	70	1	150	80
Trauma/Telemed/Exam	1	130	1	200	70
Office/Exam	1	149	1	150	1
Admin./Records	1	70	1	110	40
Pharmacy/Lab		-	1	80	80
Portable X-ray		-		-	-
Spec. Clinic/Health Ed./Conf.		-	1	150	150
Patient Holding/Sleep Room		-	1	80	80
Storage		-	1	100	100
HC toilet	1	75	2	2 @ 60=120	45
Janitorial Closet	1	30	1	30	0
Total Net Area				1270	
Mechanical Room		-		147	147
Morgue		-		30	30

The Chalkyitsik Clinic has a current gross area of 768 s.f. This would require a gross building area expansion of approximately 1232 s.f. in order to meet the 2000 s.f. minimum ARPCF requirements for a Medium clinic.

An analysis of the existing building's program functions follows. Please also refer to the floor plan in Section H:

- **Arctic Entries**: The clinic main entry utilizes the building main entry vestibule. The clinic second exit has no arctic entry.

- **Waiting:** the waiting area is too small and poorly configured. Furniture impedes traffic from the main entry, and there is no sense of privacy due to lack of acoustic insulation at office and exam rooms.

- **Trauma/Telemed/Exam:** None provided

- **Office/Exam:** This clinic has two exam rooms. One of the rooms is small but functional. The second exam room includes the second clinic exit; this room is filled with storage items and does not function as an exam room.

- **Administration/Records:** The administration area consists of one room immediately adjacent to the waiting area. The office area is small but functional.

- **Pharmacy/Lab:** None provided.

- **Specialty Clinics:** Specialty clinics require the use of one of the exam rooms and the corridor space. This is a disruption to ongoing clinic activities.

- **Patient Holding/Sleep:** None provided in the clinic.

- **Storage:** None provided.

- **HC Toilet Room:** The toilet room lacks adequate clear space for ADA accessibility and does not have ADA accessible fixtures.

- **Janitor Closet:** The janitor area is small and incorporated into a small mechanical area.

- **Ancillary Spaces:** There are no ancillary spaces in this clinic.

D. Architectural/Structural Condition

The clinic area is approximately 24’ x 32’. Overall the building is relatively new and in good condition. The building utilizes a triodetic foundation for unstable soils, laid on a gravel pad. The floor system is 2x12 beams and 2x12 joists. The walls and roof are of panelized construction, and the roof appears to be a good quality metal roof.

Because of its location in the building and the condition of the existing structure, a new addition at the gable end of the building could be incorporated in order meet the guidelines for the Medium Clinic. Any expansion would need to include a substantial interior remodel, however the existing building appears suitable for such work. In addition, a new ramp with new grating would need to be constructed at the gable end of the building to avoid ice and snow hazards, or a gable roof will need to be extended over part of the ramp in order to shelter it from ice and snow.

E. Site Considerations

The current site would be satisfactory for an expansion. If a replacement clinic is constructed, a nearby site would be advantageous due to proximity to the water treatment plant, the washeteria, and its location along the main street. There appear to be several sites available near the existing clinic. Site utilities available at these locations include village water, sewer, power, and telephone service directly to the building.

F. Mechanical Condition

Heating and Fuel Oil: Heat for the clinic is provided by two fuel-fired boilers shared with the adjoined washeteria. Multiple circulation pumps are provided to circulate the heating fluid to the heating zones. One of the circulation pumps serves a single zone of baseboard heat in the clinic. The system is only three years old, was well installed and has been maintained. Fuel oil is provided from a 460-gallon fuel tank. The tank and piping is well supported, but the tank does not have the proper emergency venting, overfill protection, or a ladder to fill the tank. Piping is provided to a 5 gallon warming tank located in the boiler room before it is piped to the boilers and back-up power generator.

Ventilation: There is no mechanical ventilation or exhaust for the clinic. The only source of ventilation for the occupied spaces is though operable windows. Exhaust fans need to be installed for the restroom and the janitor closet. The clinic needs to be provided with a mechanical ventilation system and should not rely on operable windows alone.

Plumbing: Water and sewer utilities are provided by the adjoined washeteria. Hot water is generated in the washeteria by a boiler water heat exchanger and hot water storage tank. Plumbing fixtures in the clinic include a toilet, lavatory, and shower/tub in the restroom. The restroom plumbing fixtures are close to meeting ADA requirements, but the waste and hot water supply on the lavatory is not insulated. There are sinks in the exam rooms and a mop sink in the janitor's closet. Water pressure and temperature were reported to be low in the clinic.

G. Electrical Condition

Power: There are two 120/240-volt single-phase services provided to the building. One serves the clinic the other the washeteria. The clinic's electrical meter is fed from an overhead service. The meter base is grounded to a grounding rod located below the meter. A 200-amp breaker is provided prior to the electrical panel located in the clinic. The panel installation appeared neat and orderly. The panel has a maximum breaker capacity of 32 breakers, 10 have been installed and one is a spare. All wiring from the panel was run in EMT. The numbers of receptacles inside the building is appropriate, but there were no receptacles on the outside of the building. The bathroom and exam room sink outlets have GFCI protection through GFI breakers in the breaker panel. Heat trace for the waste piping below the building was recently damaged and was in the process of being replaced.

Lighting and Emergency Fixtures: Interior lighting is provided from Fluorescent fixtures and the lighting levels appear adequate. Emergency exit signs are provided in the clinic while emergency lights are not provided. In lieu of emergency lighting clinic personnel would like to have the clinic connected to the washeteria standby generator. Exterior lighting is provided with incandescent fixtures at the front entrance. A single battery operated smoke detector is installed in the clinic.

Telecommunications: The telecommunication system includes one phone line serving the clinic.

H. Existing Facility Floor Plan

See following sheet for the floor plan of the existing clinic.

J. Community Plan

Refer to the attached community plan for location of the existing clinic and the proposed location for the new clinic. If the existing clinic site is the preferred location or if a new site has not yet been selected, only the existing clinic location will be shown.

IV. DEFICIENCY EVALUATION AND COST ASSESSMENT

The attached deficiency reporting forms are based on Public Health Service form AK H SA-43. The forms are numbered sequentially for each discipline starting with **A01** for Architectural and structural deficiencies, **M01** for Mechanical deficiencies and **E01** for Electrical deficiencies.

A. Deficiency Codes

Deficiencies are further categorized according to the following PHS Deficiency codes to allow the work to be prioritized for federal funding, should that apply. Deficiency codes used in this survey include:

02 **Fire and Life Safety:** These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated building codes including the International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code.

03 **Safety:** These deficiencies identify miscellaneous safety issues.

04 **Environmental Quality:** This addresses DEC regulations, hazardous materials and general sanitation.

05 **Program Deficiencies:** These are deficiencies which show up as variations from space guidelines established in the Alaska Primary Care Facility Facility Needs Assessment Project and as further evaluated through observation at the facility site and documented in the facility floor plans.

07 **Disability Access Deficiencies:** The items with this category listing are not in compliance with the Americans with Disabilities Act.

08 **Energy Management:** These deficiencies address the efficiency of heating systems/fuel types and the thermal enclosures of buildings.

11 **Structural Deficiencies:** These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.

12 **Mechanical Deficiencies:** These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems.

13 **Electrical Deficiencies:** These are deficiencies with electrical generating and distribution systems, fire alarm systems and communications systems.

14 **Utilities:** This category is used for site utilities, as opposed to those within the building and may include sewer lines and water and power distribution.

B. Photographs

Each sheet has space for a photograph. Some deficiencies do not have photos. Photographs do not cover all areas where the deficiencies occur but are intended to provide a visual reference to persons viewing the report who are not familiar with the facility. Additional photographs of the clinic and the surrounding area are included in Appendix B.

C. Cost Estimate General Provisions

New Clinic Construction

- **Base Cost**

The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency) The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

- **Project Cost Factors**

  Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.

  Design Services is included at 10% to cover professional services including engineering and design.

  Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

  Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Estimated Total Project Cost of New Building**

This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

Remodel, Renovations, and Additions

- **Base Cost**

The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

The cost of Additions to clinics is estimated at a unit cost higher than New clinics due to the complexities of tying into the existing structures.

Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

- **General Requirements Factor**

General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Contingency for Design Unknowns (Estimating Contingency)**

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

- **Estimated Total Cost**

This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

- **Project Cost Factors**

Similar to new clinics, the following project factors have been included in Section VI of this report.

Design Services is included at 10% to cover professional services including engineering and design.

Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Estimated Total Project Cost of Remodel/Addition**

This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

V. SUMMARY OF EXISTING CLINIC DEFICIENCIES

The attached table summarizes the deficiencies at the clinic and provides a cost estimate to accomplish the proposed modifications. If all deficiencies were to be addressed in a single construction project there would be cost savings that are not reflected in this tabulation. The total cost of remodel/addition shown in Section VI is intended to show an overall remodel cost that reflects this economy. Refer to Section VI for a comparison of remodel/addition costs to the cost of new construction. The specific deficiency sheets are included in Appendix A.

VI. NEW CLINIC ANALYSIS

The decision on whether to fund new clinic construction or a remodel/addition of the existing clinic is to be determined by comparing the cost of a new facility designed to meet the program requirements of the Alaska Rural Primary Care Facilities minimum area requirements with the projected combined cost of renovating, remodeling and adding onto the existing building to provide an equivalent facility. If the cost of the remodel/addition project is greater than 75% of the cost of constructing an altogether new facility then a new facility is recommended. That ratio is computed as follows:

- **The cost of a new clinic in Chalkyitsik is projected to be:**

Base Anchorage Cost per s.f.		$183/ s.f.
Medical Equipment Costs @ 17%		$31
Design Services 10%		$18
Construction Contingency 10%		$18
Construction Administration. 8%		$15
Sub-total		$265/ s.f.
Area Cost Factor for Chalkyitsik	1.66*	
Adjusted Cost per s.f.		$439/ s.f.

Total Project Cost of NEW BUILDING 2,000 x $439 = $878,000

- **The cost of a Remodel/Renovation/Addition is projected to be:**

Projected cost of code/condition renovations (From the deficiency summary)
90% of cost of code/condition improvement** $211,127 Renovation

Projected cost of remodeling work (See A09)
768 s.f. clinic @ 20% remodel = 150 s.f. $30,705 Remodel

Projected cost of building addition (See A08)
2,000 s.f. – 768 s.f. = 1,232 s.f. $612,042 Addition
Design 10%, Const. Contingency 10%, Const. Admin. 8% $239,085

Total Project Cost of REMODEL ADDITION **$1,092,959**

- **Ratio of remodel:new is $1,092,959 : $878,000 = 1.24X**

The cost of a remodel/addition for this clinic would cost 124% the cost of a new clinic, therefore, a new clinic is recommended for this community.

* The Area Cost Factor was refined by Estimations, Inc. in July 2001 based on information obtained during the site visit.

** The 90% factor represents economy of scale by completing all renovation work in the same project.

Appendix A: SPECIFIC DEFICIENCIES LISTING

Refer to the attached sheets for the listing of the individual deficiencies and the corrective action recommended.

Appendix B: GENERAL SITE PHOTOGRAPHS

The following sheets provide additional photographic documentation of the existing building and surroundings.

Appendix C: ADCED Community Profile

Refer to the attached document prepared by Alaska Department of Community and Economic Development profiling the community of Chalkyitsik.

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